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JAN 20 2000

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Hello and thank you for this opportunity to speak. My name is George Boniface; I live here in St. Louis MO.

I would like to draw attention to a past record as a possible indicator of future tendencies.

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The history of environmental cleanup at the Hanford Washington nuclear site gives cause for great concern as to the ability and competency of the Department of Energy to deal with the problems associated with nuclear and other hazardous waste cleanup. The more one looks at the matter the more horrifying it becomes.

Since before the first nuclear waste was created, the issue of how to deal with it has been put firmly on the back burner. Over 50 years have passed and the nuclear pot is literally boiling over. In fact many of the storage tanks at Hanford have been described as "self boiling" nuclear stew. They give off dangerous gases, which occasionally explode. They have leaked into the atmosphere, and are definitely leaking into the soil.

The trusting public was told for "decades" that containment is not a problem. Should the tanks ever leak the vadose zone will contain the nuclear material. Simply put, the vadose zone is the layer of relatively dry earth above the water table. The vadose zone was to be the fail-safe barrier between the water supply for millions, and the most toxic substances known to man. Steel and vadose...duck and cover.

In fact presently, the understanding of how nuclear material actually behaves in the vadose zone is tragically deficient. There's a big gap and knowledge. There's a big gap in containment. It is horrifying to think that so little concern was shown for the fail-safe barrier known, as is vadose zone. The Department of Energy pretends to be a steward of our environment. The reality is something entirely different.

One may ask, "how can this be" Well, little interest.... Allocates insufficient resourcesyields little understanding. Iron fisted denial has worked well for years to fill the gaps. Matthew Wald reported in his New York Times article, titled Admitting Error at Weapons Plant dated March 23rd, 1998, that they didn't know because they didn't want to know. The Honorable Sen. Ron Wyden from Oregon was quoted "the Department of Energy has been sticking its head in the contaminated sand for years... the departments official story was that the contamination stopped a few feet beneath the tanks ... and when they got samples from the bore holes drilled near the tanks that showed contamination at much deeper levels, they argued the contamination could have been pushed down by the drilling."

Armed with an insufficient grasp of the problem, the DOE set out to cleanup the leaking tanks. The action plan reads like Dr. Seuss's The Cat and the Hat. Take a mess and make it bigger. They laid a bed of gravel over the contaminated soil to protect workers. It would seem, covering things up it's one thing the DOE good at doing. However, in so doing, water that would otherwise evaporate or be absorbed by plants was trapped in the gravel. It is now percolating through the nuclear waste and the vadose zone. Water it turns out, is an excellent conduit for plutonium dioxide. Plutonium dioxide is plutonium's form of rust. There is no safe level of exposure to this material. It was thought to be the most stable form of plutonium for long-term storage. The old theories suggest this material might piggyback on a colloidal material, or clay and hitch ride downstream. New evidence has demonstrated that it is water-soluble and is easily washed away. After pumping the liquid waste out of the leaking tanks the next bold move was to remove the unpumpable sludge and solid waste by using high-pressure hoses, creating slurry and sluice it out. If this sounds a little risky, a little ill conceived, its because it is. This action forces more radioactive material from the already damaged tanks into the vadose zone. The vadose zone drains into the water table that is only a few miles from the Columbia River.

In the mid-1980s the Honorable Sen. John Glenn from Ohio, as chairman of the Government Operations Committee investigated Hanford. He made requests for more vigorous monitoring of soil contamination. Six years past, and Hanford only had promises and fired whistle blowers to show for it. Frustrated at the inaction Sen. Glenn and Sen. Wyden asked the Government Accounting Office to investigate. The GAO report revealed this horror story of negligence. Only in the glare of light from this report did the Department of Energy admitted it made a mistake in its lack of understanding of the vadose zone. The

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consequences have been severe. Nearly 1 million gallons of radioactive waste has leaked. It has reached the groundwater. It is endangering wildlife commercial fisheries and everyone downstream from Hanford on the Columbia River. It would seem systemic problems at the DOE ,have now created systemic problems in the Columbia River basin.

The Department of Energy said for decades the waste and the storage tanks would not reach the groundwater for 10,000 years. Precious time was lost. Consequences multiplied. The tanks are barely 50 years old. The nuclear waste is already there. This 10,000 year promise sound strikingly similar to the 10,000 year promise made for the scheme planned for Yucca Mountain. Perhaps we should reconsider.

Thank you.

Sources

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